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Strategy for capacity development in United Nations Economic Commission for Europe region

UNECE Statistical capacity development strategy

Note by the Secretariat

Summary

At its October 2017 and February 2018 meetings, the Bureau of the Conference of European Statisticians (CES) discussed statistical capacity building in the UNECE region. The Bureau strongly supported proposals that the Secretariat should continue to implement statistical capacity development to respond to new initiatives at the global level, including statistics for the Sustainable Development Goals (SDGs), increased use of geospatial information, and modernisation of official statistics. The Bureau noted that all countries require improvement of their statistical capacities in the context of measuring SDGs.

This strategy document sets out the principles, priorities and tools that will form the basis for future UNECE statistical capacity development activities. The CES Bureau agreed on the strategy at its February 2018 meeting, and asked the secretariat to circulate the document for electronic consultation among all CES members.

Subject to a positive outcome of the consultation, the 2018 CES plenary session will be invited to endorse the Strategy.

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I. Introduction

1. At its meetings in in October 2017 and February 2018, the Bureau of the Conference of European Statisticians (CES) strongly supported proposals that the UNECE Secretariat should continue to develop and implement statistical capacity development activities to respond to new initiatives at the global level. These initiatives include statistics for the Sustainable Development Goals (SDGs), the increased use of geospatial information, and the modernisation of official statistics. In addition, the UNECE Expert Meeting on Statistics for SDGs in April 2017 emphasised that all countries require improvement of their statistical capacities in the context of measuring SDGs.

2. PARIS21 (the Partnership in Statistics for Development in the 21st Century), which is hosted by OECD, has convened a group of experts from national and international statistical organisations to review the approach to statistical capacity development at the global level, based on the discussion paper "Realising the Data Revolution for Sustainable Development: Towards Capacity Development 4.0"[1]. UNECE actively participates in this group, and has benefitted from the exchange of ideas. The UNECE strategy is in line with the conceptual framework being developed by this group, and can be seen as a means of implementing it in the UNECE region.

3. In pursuing its programme of work in the region, UNECE closely collaborates with other important stakeholders to complement activities, find synergies and avoid overlap, particularly Eurostat and the European Free Trade Association (EFTA). Eurostat is an important actor, present in the region in the context of the European Commission's Enlargement and Neighbourhood Policies (ENPs) and respective priorities. Eurostat is currently preparing a regional statistics programme (Statistics for the Eastern Partnership), for implementation to start in late 2018/early 2019. The programme, financed from the EU's external action budget, will support the development of official statistics in the six countries of the ENP East (Ukraine, Belarus, Republic of Moldova, Georgia, Armenia and Azerbaijan.) In addition, Eurostat supports statistical activities from the European Statistical Programme, for example, training as well as the organisation of statistical workshops and high level seminars. These cover mainly the ENP East region but also the participation of statisticians from Central Asia.

4. Eurostat also supports the countries that have a perspective of accession to the EU (EU enlargement countries) in their preparations for membership of the EU, by providing technical assistance focused on the development of all statistical areas that are part of the EU legal requirements. This includes assessing their compliance with EU standards in statistics and with the European statistics Code of Practice, as well as being involved in the accession negotiations in the part of the future accession treaty that relates to statistics. The means for the statistical cooperation programmes come mainly from the EU Instrument for Pre-accession Assistance (IPA).

5. Taking account of the above drivers for change and partnerships, this strategy document sets out the principles, priorities and tools that will form the basis for future UNECE statistical capacity development activities.

II. Current situation

6. According to the UNECE Strategic Framework for 2018-19, the statistical work programme will

[1] http://www.paris21.org/capacity-development-40

"support statistical capacity building of ECE member States, particularly of those with less developed statistical systems. It will promote the implementation of the Fundamental Principles of Official Statistics and other United Nations standards and best practices, and provide advice on legal and institutional frameworks of official statistics. This work will be demand-driven and address national priorities identified through global assessments of national statistical systems. It will focus on modernizing statistical production, population censuses, SDGs indicators, gender-disaggregated statistics, economic statistics, environmental accounting and indicators."

7. Statistical capacity development is a cross-cutting responsibility for all staff of the UNECE Statistical Division. It is closely tied to the development and implementation of standards and guidelines in many areas of official statistics. Within UNECE, statistical capacity development activities are coordinated by a Regional Adviser on statistics. In most cases, these activities are carried out in collaboration with other national or international statistical organisations.

8. UNECE statistical capacity development activities have traditionally focused on the countries in the Eastern Europe, Caucasus and Central Asia sub-region. However, recent developments such as SDGs and the need to modernise statistical production affect all UNECE member countries. Few countries can currently produce more than about half of the indicators needed for measuring SDGs. Other related challenges include the growing importance of integrating statistical and geospatial information, demands for many new types of statistics, and the appearance of potential new data sources. Statistical capacity development is, therefore, urgently needed in all UNECE countries, though the amount, nature, type and form will naturally vary from country to country.

III. A new approach to capacity development

9. In the past, UNECE statistical capacity development has focused mainly on providing training workshops. These were mostly related to specific subject-matter domains. In this way, the focus was more on people than on the organisation. In view of the new challenges identified above, and particularly the demands related to producing statistics for SDGs, a new, more holistic approach is needed. This requires a strategy that considers all aspects of the organisation, and targets support and development where they are most needed.

10. The cornerstone of the strategy is the concept of capabilities. In general terms, a capability is defined as the "ability that an organisation, person, or system possesses - capabilities typically require a combination of organisation, people, processes, and technology to achieve"[2]. Capabilities are things that an organisation does, or needs to do. Examples in statistical organisations could include seasonal adjustment, internet data collection, or applying machine-learning techniques. As the definition above says, capabilities require combinations of different factors or dimensions – rather like the economic concept of factors of production (land, labour, capital). The full set of dimensions for capabilities in official statistics is presented in Section IV(C) below, and defined in more detail in the Annex.

11. One reason for not just focusing on training people is that some statistical organisations struggle to pay a competitive salary, and hence have a high staff turnover. Training people can therefore have a limited impact. Whilst training of people will still be needed, it should be undertaken in combination with ensuring that the organisation is

[2] Derived from the definition used in The Open Group Architecture Framework (TOGAF) - http://pubs.opengroup.org/architecture/togaf9-doc/arch/chap03.html

sufficiently equipped in terms of methods, technology, processes, information and standards, whilst ensuring a suitable institutional framework is in place.

IV. A strategy for statistical capacity development

12. The strategy for statistical capacity development is based on three pillars: principles, priorities and tools.

A. Principles

13. The strategy is based on the following principles:

- Open to all – capacity development is needed by all UNECE countries, in the context of data for SDGs and modernising statistical production, regardless of the level of development of their statistical systems;
- Linked to UNECE's normative work – capacity development activities promote the implementation and use of CES standards and guidelines;
- Focused – related to the above point, capacity development activities focus on areas where UNECE has recognised expertise, to ensure optimal use of limited resources;
- Results oriented – capacity development activities are planned and implemented to maximize their impact. This impact is assessed, and the results of assessments are used to improve the efficiency of future activities;
- Demand driven – capacity development activities respond to the needs identified and requested by countries, including through global assessments of national statistical systems;
- Cooperation and partnership with others – capacity development activities are coordinated with other "provider" organisations, to avoid duplication and ensure coherent and consistent advice to countries;
- Sustainability – capacity development activities result in sustainable increases in capacity in beneficiary countries.

B. Priorities

14. Whilst capacity development activities will be demand driven, and priorities will therefore be set by national requirements, it is possible to identify some of the likely priority topics for capacity development over the next three to four years, based on observation of recent trends. Likely priorities include:

- Statistics for SDGs – with a focus on institutional issues;
- Geospatial information management, including integrating statistical and geospatial information;
- Population and housing censuses, migration and gender statistics;
- Environment statistics and environmental-economic accounting;
- Modernising official statistics;
- Core economic statistics and the impacts of globalisation.

15. In addition, increased emphasis will be placed on enhancing management and organisational capacity. This will include strategic topics such as change and risk management, developing effective partnerships, capability and resource planning. The UNECE work on modernisation of official statistics, has shown that often the main barriers to development are not technological. They are more often linked to organisation and management culture. Training technical experts will not have the required impact if the organisation and management cultures do not support development and change.

C. Tools

16. Statistical capacity development activities will have a much wider scope than just the provision of training. They will draw on the definition of capabilities, introduced in paragraph 7 above. According to that definition, capabilities have several dimensions. The full set of dimensions for statistical capabilities is shown in Figure below, and these dimensions are defined in the Annex.

Figure
The Seven dimensions of statistical capabilities

17. To improve a capability in a statistical organisation, it is usually necessary to address several of these dimensions. For example, in the case of seasonal adjustment, just training people, or providing a software tool, will not be sufficient to ensure that the organisation has that capability. Capacity development has to take a more holistic approach, taking all seven dimensions into account.

18. For any capability (such as seasonal adjustment) it is possible to assess the current level of an organisation, and to identify a desired future level. This assessment can be broken down by the capability dimensions shown above, to identify which of the dimensions are priorities for investment and capacity development. The "maturity model" approach can be a useful management tool for this purpose. The use of maturity models is explained and illustrated in the annex.

V. Implementing the strategy

19. The first concrete step towards implementing the strategy will be to put in place a mechanism for gathering national priorities on an on-going basis. This will build on the information obtained during the electronic consultation of the strategy with the members of the Conference of European Statisticians, as well as:

(a) Information from the global survey of capacity development needs in the context of statistics for SDGs, conducted by PARIS21 and the High-level Group for Partnership, Coordination and Capacity-Building for statistics for the 2030 Agenda for Sustainable Development (HLG-PCCB);

(b) Recommendations from the Global Assessments of National Statistical Systems conducted jointly be UNECE, Eurostat and EFTA;

(c) Needs identified by UNECE expert groups and through existing capacity development activities.

20. National priorities will be assessed using the principles set out in the strategy, to see how the identified needs can be most efficiently addressed, in collaboration with partner organisations where appropriate.

Annex

Capabilities and maturity models

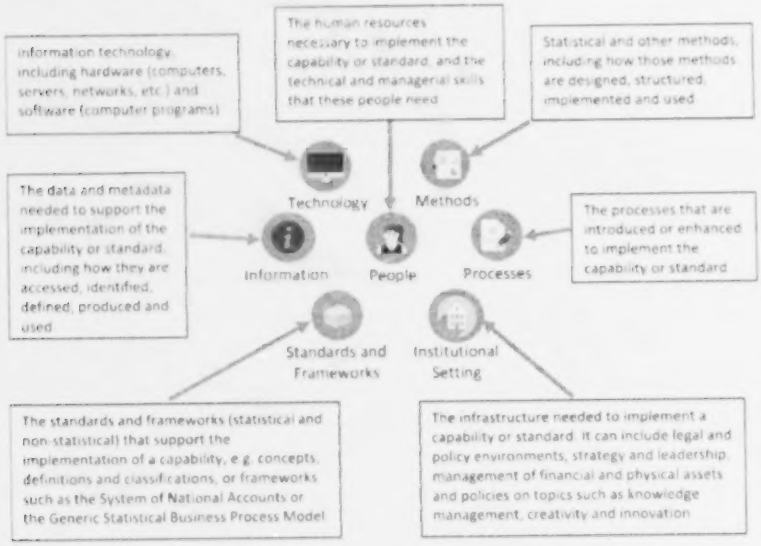
A. What is a capability?

1. A capability is defined as "The ability that an organisation, person, or system possesses. Capabilities typically require a combination of organisation, people, processes, and technology to achieve" (Source: The Open Group Architecture Framework v9.1 - http://pubs.opengroup.org/architecture/togaf9-doc/arch/chap03.html).

2. Practical examples of capabilities in statistical organisations include seasonal adjustment, internet data collection, web dissemination, data editing, questionnaire design, etc. The idea of capabilities can also be applied to implementation of statistical standards.

3. What are the dimensions of statistical capabilities? As the definition says, capabilities require combinations of factors or dimensions – rather like the economic concept of factors of production (land, labour, capital).

Figure I
Full set of dimensions for statistical capabilities


Information technology, including hardware (computers, servers, networks, etc.) and software (computer programs)
The human resources necessary to implement the capability or standard, and the technical and managerial skills that these people need
Statistical and other methods, including how those methods are designed, structured, implemented and used
Technology
Methods
The data and metadata needed to support the implementation of the capability or standard, including how they are accessed, identified, defined, produced and used
Information
People
Processes
The processes that are introduced or enhanced to implement the capability or standard
Standards and Frameworks
Institutional Setting
The standards and frameworks (statistical and non-statistical) that support the implementation of a capability, e.g. concepts, definitions and classifications, or frameworks such as the System of National Accounts or the Generic Statistical Business Process Model
The infrastructure needed to implement a capability or standard. It can include legal and policy environments, strategy and leadership, management of financial and physical assets and policies on topics such as knowledge management, creativity and innovation

4. To improve a capability in a statistical organisation, it is usually necessary to address several of these dimensions. For example, in the case of seasonal adjustment, just training people, or providing a software tool, will not be sufficient to ensure that the organisation has that capability.

5. There will be some cases where one or more dimensions will not be relevant, in these cases those dimensions can be ignored.

B. What is a maturity model?

6. A maturity model is a self-assessment tool to help an organisation understand the extent to which it has developed a capability or implemented a standard. In other words, it helps the organisation to understand its level of "organisational maturity" with respect to that capability or standard. Maturity models are tables where the columns show the maturity levels and the rows show the maturity dimensions. The dimensions should be the same as those defined above for capabilities (technology, methods, information, people, processes, standards and frameworks, and institutional setting). Depending on the type of capability or standard, one or more of the dimensions might not be relevant. If so, these dimensions can be ignored.

7. Each cell in the maturity model table should contain a short description of what that combination of maturity level and dimension means in practice. These descriptions will often be specific to each capability or standard.

8. The idea of maturity models for official statistics has been adapted from the Open Group Service Integration Maturity Model (OSIMM)[3]. Several pilot maturity models were developed under the UNECE High-Level Group for the Modernisation of Official Statistics in 2016, covering the implementation of the Generic Statistical Business Process Model and related standards, as well as risk management in statistical organisations[4].

Figure II
Maturity levels

	Maturity Levels				
Dimensions	Initial awareness	Pre-implementation	Early implementation	Corporate implementation	Mature implementation
People	Description	Description	Description	Description	Description
Methods	Description	Description	Description	Description	Description
Technology	Description	Description	Description	Description	Description
Standards / frameworks	Description	Description	Description	Description	Description
Processes	Description	Description	Description	Description	Description
Information	Description	Description	Description	Description	Description
Institutional setting	Description	Description	Description	Description	Description

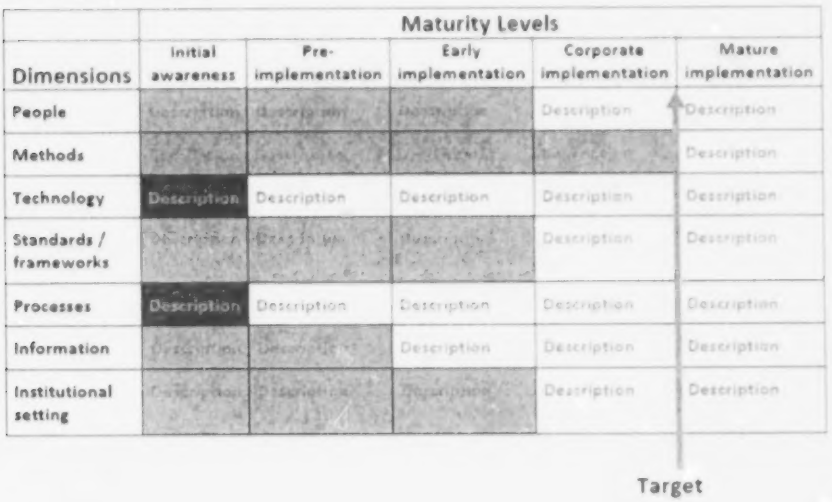
C. How should maturity models be used?

9. Maturity models are used to determine the current level of maturity, and also to define the target level for the organisation. They are management tools to identify where improvements are needed, and to help decide on priorities. The target level of maturity might be "Mature implementation", but for some capabilities or standards, the organisation might decide that a lower level of maturity is sufficient. In the example below, the target maturity level is "Corporate implementation". The organisation has decided that it has already reached this level for the "Methods" dimension, but not for the other dimensions. It

[3] http://www.opengroup.org/soa/source-book/osimmv2/
[4] https://statswiki.unece.org/pages/viewpage.action?pageId=129172266

has most work to do in the "Technology" and "Processes" dimensions, as the organisation is only at the "Initial awareness" level for these dimensions. As a result of this assessment, the "Technology" and "Processes" dimensions are likely to be priority areas for future work.

Figure III
Maturity levels targets



10. There may be cases where it is preferable to set different target maturity levels for the different dimensions, this is also possible. In such cases, the relative distances between the current and target levels should be considered when deciding on priorities.

11. A further development of this approach could be to collect information about how organisations have increased their maturity levels for the different dimensions of key capabilities. If this could be done in a structured way, it could provide a sort of "roadmap" of good practices for other organisations to follow. Some prototype templates for this sort of "roadmap" were also developed during 2016 in the "Modernisation Maturity Models" project under the High-Level Group for the Modernisation of Official Statistics[5].

[5] https://statswiki.unece.org/display/RMIMS/MMM+Roadmap+Tools